Calendar No. 848

98TH CONGRESS
2d Session

SENATE

REPORT
98-431

MANUFACTURING SCIENCES AND TECHNOLOGY RESEARCH AND DEVELOPMENT

MAY 8 (legislative day, APRIL 30), 1984.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 1286]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1286) to establish a program to conduct research and development for improved manufacturing technologies, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill do pass.

PURPOSE AND BRIEF DESCRIPTION OF MAJOR PROVISIONS OF THE BILL

The purpose of S. 1286, as reported, is to restore and enhance American technological leadership and innovation in manufacturing through reinvigorated university research, with a participating role for industry. By supporting university research in advanced manufacturing technologies, the bill also encourages the training of students in, and promotes the importance of, the manufacturing field within the engineering discipline.

The bill, as reported, authorizes the establishment of a new program in the Department of Commerce for research into advanced manufacturing processes and methods. The bill contains five major provisions, designed to address the findings of the Committee and to achieve the stated purposes and goals:

1. Centers for Manufacturing Research and Technology Utilization (Section 5).

The bill authorizes the Secretary of Commerce to enter into cooperative agreements with consortia (defined as groups consisting of a nonprofit research institution and such other entities as States, industry, industry associations, etc.) to establish and support geographically distributed centers. These centers will conduct research

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on new technologies and/or on methods of increasing the utilization by private industry of existing advanced manufacturing methods. The research carried out at the centers may be directed to the needs of a particular industrial sector. The Secretary is directed to enter such agreements with applicants who meet the criteria of the act, and as the Secretary shall establish.

2. Research Grants and Contracts (Section 5).

The bill authorizes the Secretary of Commerce to award grants and enter into contracts to provide for research in fields relevant to manufacturing methods and processes. The Secretary is directed to award such grants and enter into such contracts with applicants who meet the criteria of the act, and as the Secretary shall establish.

3. Program for Advanced Manufacturing Methods Utilization and Impact Assessment (Section 6).

The bill authorizes the establishment of experimental activities, within the Department of Commerce, to identify approaches for enhancing the utilization by industry of technologically advanced manufacturing methods. Such approaches may include, for example, innovative programs in technology transfer.

The bill also directs the Secretary to establish a program to identify the effects of enhanced usage of advanced manufacturing methods upon workers, including the potential need for retraining of displaced workers.

4. Competitiveness Studies (Section 7).

The bill directs the Secretary to analyze the long term ability of certain technology-sensitive industrial sectors to remain competitive. The bill provides specific factors which shall be included in the study of such industrial sectors.

5. Manufacturing Sciences and Technology Enhancement Advisory Committee (Section 8).

The bill authorizes the establishment by the Secretary of an Advisory Committee to: review criteria and policies for grants, contracts and cooperative agreements; assess the effectiveness of the activities established by the act; and submit on an annual basis a report and recommendations on the progress of programs and activities authorized by the act. The Advisory Committee will include representatives from technology-sensitive industrial sectors, labor, the manufacturing research community and such other groups as the Secretary considers appropriate.

BACKGROUND AND NEEDS

The role of manufacturing in the U.S. economy

Manufacturing is one of the most important sectors of our economy. Along with agriculture, mining, construction and services, manufacturing provides the basis for our Nation's economic output.

The manufacturing sector as a whole contributes approximately one-fifth of the U.S. Gross National Product (GNP) and a similar fraction of all civilian employment. Thus, simply on the basis of contributions to output and employment, manufacturing is of the utmost importance to the Nation. However, data on production and jobs alone fail to capture the full role of manufacturing in the economy. In a very real sense, without a viable and vibrant manufacturing sector, the

U.S. economy could not exist in its current form and at its current level of wealth per capita.

Since World War II, manufacturing has held a relatively constant share of total U.S. economic activity measured in term of GNP, with its fraction of GNP rising from just above 24 percent in 1947, to a high of just over 25 percent around 1965, and declining since to a low of 22.6 percent in 1982. The fraction of civilian employment accounted for in manufacturing has declined from above 27 percent in the mid-1950's to 18.6 percent in 1983.

Manufacturing is defined as the branch of industry that uses labor and capital to convert raw materials and semifinished parts into goods for use by consumers or other industrial firms and that does so at plants with fixed locations. Most manufacturing is done in large factories, but a substantial part of manufacturing in the United States is done by small firms. For example, firms employing less than 500 people were responsible for 29 percent of all manufacturing output in 1982.

Manufacturing industries range from the very latest "high tech" industries producing electronic components, computers, and genetically-engineered biopharmaceuticals, to the most mature of industries whose "low tech" products include such items as bricks, carbon steel, and wooden boxes. No program to address the challenges and opportunities faced by the manufacturing sector can be complete unless it addresses the diversity of needs of firms of different sizes and in different sectors.

Manufacturing industries can be divided into those that are predominantly devoted to forming and/or assembly of mechanical or electrical products from discrete parts, and those that employ continuous chemical and/or physical processes to convert basic raw materials into finished raw materials of a nondiscrete nature. The former include the automobile, home appliance, optical and medical instrument, and furniture industries, while the latter include such industries as chemicals, petroleum, steelmaking and glassmaking.

In general, the scientific basis for designing and improving manufacturing technologies employed by the chemical process industries is more firmly established than it is for manufacturing technologies used in the assembly and forming industries. The fields of chemical, petroleum and metallurgical engineering are based on sophisticated principles and methods of design and analysis, whereas the field of manufacturing engineering, which is more closely associated with the assembly and forming industries, is not so well-established. The reasons for this difference include the differing nature of the technologies historically employed, and the different bases for competition among firms in the different classes of industries. For example, competition in the process industries tends to be based heavily on small price differences for similar products, whereas competition in the assembly and forming industries is based more on product differences.

Relationships between academia and industry are better-established in the process industries, which tend to be dominated by a few large firms with common interests in process improvements, than in the assembly industries, which tend to have a much greater diversity of producer firms with less common interest in improving particular tech-

niques of manufacturing. This last factor has contributed to a better match of the interests and skills of engineering faculty and students with those of industry in the process sector than in the assembly sector of manufacturing. In turn, this has contributed to a more effective system for developing and using better manufacturing techniques in the process industries than in the others. The experiences of the process industries may offer some useful insights into how the technologies of the assembly and forming industries might best be improved.

Observation of the evolution of the manufacturing technologies in a variety of industries suggests that a pattern is generally followed. In the eary stage of a new industry, firms focus on developing and improving the characteristics of the new products they wish to market. At this stage, manufacturing methods are usually *ad hoc* in nature. Skilled workers make the product, and they work closely with designers, engineers and entrepreneurs to piece together production methods and to address production difficulties. If the new product becomes successful in the market and the pressure grows to cut costs in order to meet competition or to increase sales, attention turns to improving the efficiency and economics of the process. Later, as the characteristics of the most successful product variant beome fixed and widely accepted, attention turns to consolidating production in a few large plants and to exploiting economies of scale, while reducing the number of product types that are produced.

Manufacturing process innovation can be either evolutionary or revolutionary in character; that is, innovations can be incremental or major. Typically, major innovations originate in research laboratories and they often come from small firms or from new entrants to an industry. They are less likely to come from large, well-established firms already in an industry. On the other hand, incremental innovation in manufacturing processes often comes from the people most closely concerned with the existing technology, such as production supervisors, operators, manufacturing engineers and equipment suppliers.

The decline of U.S. manufacturing industries is a major development in our Nation's history. Beginning with the industrial revolution shortly before the Civil War, manufacturing industry growth has been the principal vehicle of U.S. economic growth. Until 1966, manufacturing industries grew substantially more than did the economy overall. After 1966, this relationship changed (Chart 1).

Over the period 1974–82, a number of manufacturing industries experienced a decline in real output. As a group, the primary metals industries experienced an annual average rate of decline in real output of 7 percent per year. Other industries with an annual average rate of decline in output of 1 percent per year or greater include tobacco products, petroleum refining, and motor vehicles and equipment. Declines of nearly 1 percent per year in real output were seen in leather and leather products, and in lumber and wood products.

Manufacturing employment historically grew more slowly than did the economy as a whole. It dropped from 34 percent of all payroll employment in the period 1948–52 to 22 percent by 1978–82 (Chart 2).

By the early 1980s, signs had become unmistakable that manufacturing industries of other nations were surpassing many of our own in-

dustries. During the period 1974–1981, the share of domestic markets held by imports doubled or nearly doubled in five industries: tobacco products, apparel, furniture and fixtures, leather and leather products, and miscellaneous manufactures.

However, manufacturing production also has slowed in some other countries (Chart 3). Manufacturing output in other OECD countries rose only slightly more than in the United States. But manufacturing production has continued to soar in Japan.

In the late 1960s and early 1970s, Japan engaged in a massive wave of investment and continues to devote between 5 and 6 percent of GNP

Chart 1

Real Value of Industrial Production as a Percent of GNP, 1920-1982

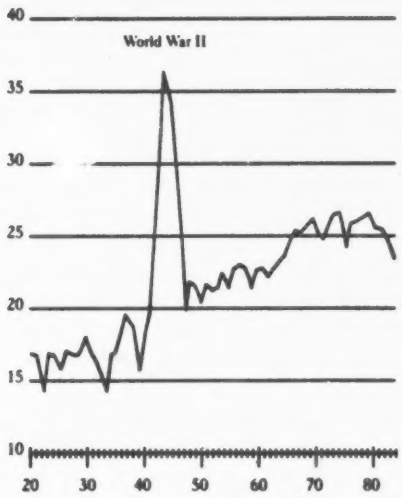


Chart 2

Manufacturing's Share of Employment, 1950-1982 (Percent)

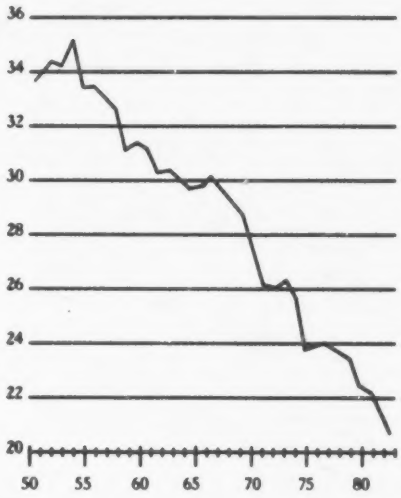


Chart 3

Manufacturing Production Japan, U.S., and OECD, 1965-1982 (Index, 1965 = 1.0)

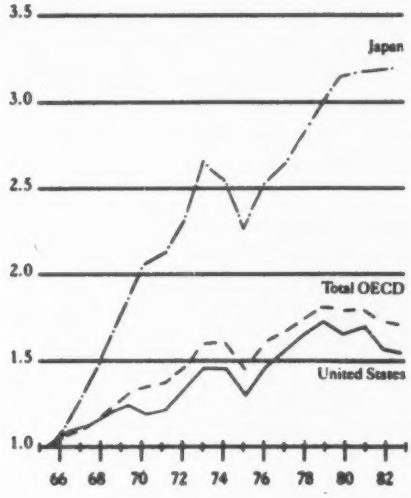
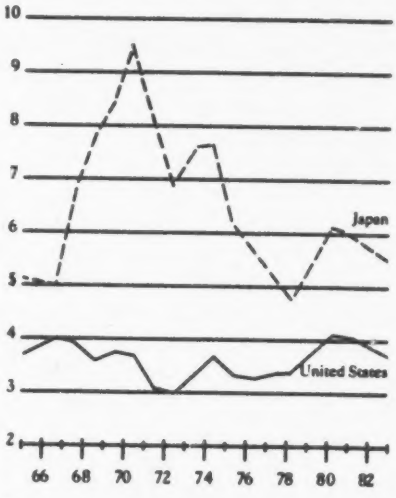


Chart 4

Real Manufacturing Investment as a Share of GNP, Japan and the United States, 1965-1982 (Percent)



to manufacturing investment. In contrast, manufacturing investment as a share of GNP is between 3 and 4 percent in the United States (Chart 4).

"Report on U.S. Manufacturing Industries," Data Resources, Inc. Permission to reprint the charts contained herein is gratefully acknowledged.

Other major industrialized nations also have done a better job of increasing manufacturing productivity over the past 15 years. Excepting the United Kingdom, most have improved their position relative to the United States.

New challenges and new opportunities for U.S. manufacturing industries

Today our Nation's manufacturing industries face challenges and opportunities of unprecedented magnitude, including: the eroding position of certain sectors in international trade, the indications that the average age of manufacturing equipment in U.S. factories is significantly greater than that in competitor nations abroad, and the declining reputation of important U.S. consumer products, such as automobiles and consumer electronic equipment.

Another factor challenging the U.S. manufacturing sector is the relatively weak educational base of its skilled laborers and engineers. Historically, manufacturing has not offered challenging engineering positions to new graduates, due, in part, to the limited opportunities it has offered for developing creative new technologies. Other areas of endeavor have been more attractive to engineers, such as defense, space, enegry, product design, and biomedical engineering. These have been the growth areas, while manufacturing has been acknowledged to be unglamorous and on the decline.

At the same time that it faces the challenges of decline and competition, the manufacturing sector stands at the brink of enormous opportunities to develop, adapt and use new and better technologies. Largely as a consequence of developments in computing, such techniques as computer-aided design and manufacturing (CAD/CAM), robotics, laser and fiber optics, and the like offer the potential to automate manufacturing to a much higher degree than previously possible to produce a wider variety of products at lower costs and greater efficiency.

Beyond merely substituting for existing manufacturing technologies, such methods offer the possibility of entirely new modes of production. For example, in order to achieve low cost and high productivity, it may no longer be necessary to make large lots of identical products at large scale on highly integrated assembly lines. Instead, with little or no sacrifice in cost, mass production may give way to flexible production in which a range of products is made on "smart" production lines to meet the special needs of small numbers of customers. Such flexible manufacturing systems may also facilitate the manufacturing of products on a smaller scale than was previously economical and thus facilitate greater regional dispersion of key manufacturing industries. Even if such products cost marginally more than ones made abroad using standard mass production techniques in low wage areas, they will be able to compete based on superior availability and responsive tailoring to meet customer needs. This approach should help to preserve the

high rate of productivity growth that is the foundation of continued wage increases for industrial workers.

With regard to technology, two major aspects are of importance. First, research is needed to help traditional and/or fragmented industries to develop new technologies that will meet the goals of higher productivity, flexibility and product quality that the marketplace now demands. The Committee believes that a program to encourage cooperation between firms and universities will be an effective approach to this need. Such a program will also help to reorient the interest of some university faculty and graduate researchers toward investigating the problems of manufacturing, and toward developing new manufacturing technologies.

Second, the Committee believes that it would be useful to explore ways to help firms make better use of the manufacturing technologies that are already available. For example, it may be possible to make use of the same information technologies that are revolutionizing manufacturing technology to assist in the dissemination of information about that technology to prospective users.

Finally, the Committee notes that it is important for manufacturing industries and their suppliers to take a strategic and long term view of their competitive circumstances. The Committee has provided, therefore, for the Federal Government, through the Department of Commerce, to engage in experimental efforts to improve the art of competitive assessment at the industry level. This program would provide a basis for improved decisionmaking in the Federal Government about technology and industrial competitiveness and would provide a test bed for improving the methods by which individual firms can do similar analyses of their own positions vis-a-vis foreign competitors.

LEGISLATIVE HISTORY

S. 1286 was introduced on May 16, 1983, by Senator Slade Gorton, and co-sponsored by Senators Goldwater, Trible, Heflin, Riegle, Lautenberg and Tsongas. The Subcommittee on Science, Technology and Space held hearings on the bill on June 21, 23, November 23, December 6, and 7, 1983. During the hearings and throughout the year, the Committee received testimony from numerous interested parties, including the Science Advisor to the President, the Department of Commerce, the National Science Foundation, the Tennessee Valley Authority, Marshall Space Flight Center, the General Accounting Office, the National Association of Manufacturers, the American Business Conference, the National Research Council, the American Association of Universities, the AFL–CIO, private industry, and the academic community.

On March 27, 1984, the Committee ordered S. 1286 reported with an amendment in the nature of a substitute. The reported bill is quite similar to S. 1286 as introduced.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act

of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, D.C., April 25, 1984.

Hon. BOB PACKWOOD,
Chairman, Committee on Commerce, Science and Transportation, U.S. Senate, Dirksen Senate Office Building, Washington. D.C.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for S. 1286, the Manufacturing Sciences and Technology Research and Development Act of 1984.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

RUDOLPH G. PENNER,
Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 1286.

2. Bill title: Manufacturing Sciences and Technology Research and Development Act of 1984.

3. Bill status: As ordered reported by the Senate Committee on Commerce, Science and Transportation, March 27, 1984.

4. Bill purpose: S. 1286 would establish a program within the Department of Commerce (DOC) to conduct research and development for improving manufacturing technologies. The Secretary of Commerce would be authorized to award grants and contracts totalling $20 million in 1985 and $30 million in each of the years 1986 through 1988, and to enter into cooperative agreements totalling $15 million in 1985 and $25 million in each of the years 1986 through 1988. S. 1286 would require the Secretary of Commerce to establish a program of experimental activities to identify the most feasible means of improving technologically advanced manufacturing methods, and would authorize the appropriation of $10 million in 1985 for this purpose. The bill would also authorize the appropriation of $2 million in each of the years 1985 through 1988 for the DOC to conduct studies of various industrial sectors considered vulnerable to foreign competition.

5. Estimated cost to the Federal Government:

	Millions
Authorization level:	
Fiscal year:	
1985	$47
1986	57
1987	57
1988	57
1989	----
Estimated outlays:	
Fiscal year:	
1985	12
1986	33
1987	51
1988	57
1989	43

In addition to the amounts specifically authorized, the bill would require the Secretary of Commerce to establish a Manufacturing Sciences and Technology Enhancement Advisory Committee to annually evaluate and recommend activities to be carried out under this Act. It is estimated that approximately $200,000 would be required for the advisory committee in each year.

The costs of this bill fall within budget function 370.

Basis of Estimate: For purposes of this estimate it was assumed that the amounts authorized in the bill would be appropriated prior to the beginning of each fiscal year. Outlays were estimated to be 25 percent the first year, 40 percent the second year, 30 percent the third year, and 5 percent in the fourth year.

6. Estimated cost to State and local governments: States would be allowed but not required to participate in certain programs authorized by S. 1286. It is not possible at this time to estimate this level of participation, however.

7. Estimate comparison: None.

8. Previous CBO estimate: None.

9. Estimate prepared by: Mary Maginniss.

10. Estimate approved by: James L. Blum, Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation;

The bill, S. 1286, provides for certain measures intended to stimulate U.S. industrial and technological innovation. The bill authorizes the establishment of cooperative agreements between the Secretary of Commerce and consortia of research institutions and industries to fund Centers for Manufacturing Research and Technology Utilization.

The bill does not regulate private business activity, or any private activity. The Committee concludes, therefore, that the implementation of this bill will have no impact on the personal privacy of any individual or business. The only records that may be required to be kept by any business will be those that will permit an adult and evaluation by the Secretary of Commerce of the disposition of any proceeds received by the centers from a grant or cooperative agreement. No reports will need to be filed by any individual or business as a result of the enactment of S. 1286.

SECTION-BY-SECTION ANALYSIS

Section 1

Cites the short title as the "Manufacturing Sciences and Technology Research and Development Act of 1984."

Section 2

Finds that manufacturing is a significant element of the Nation's economic well-being and employment, but that domestic manufacturing is threatened by foreign competition due, in part, to outdated methods and processes.

Section 3

States the purpose of the act as establishment of a program to conduct research in manufacturing technologies.

Section 4

Defines "consortia" as a group of institutions that include a nonprofit research institution and other entities; and contains other definitions.

Section 5

Authorizes funding of grants to contracts with nonprofitt research institutions, private industry or industry associations, universities or colleges, centers established pursuant to the act, or any other institution which the Secretary considers appropriate.

Authorizes funding of cooperative agreements with consortia for establishment and support of centers, pursuant to the act, to conduct research on manufacturing methods and processes.

Grants, contracts, and cooperative agreements will provide for research on more efficient manufacturing processes—defined as those that can produce similar products at lower costs, that can be adapted to a wider variety of products, or that can produce products with higher quality and higher reliability. Such processes and methods may include:

1. Computer-assisted design;
2. automated materials handling, processing, and assembly;
3. automated testing;
4. machine adaptive learning; and
5. integrated manufacturing systems, including interface of automated machines with automated and nonautomated machines, with production and design personnel, and with other systems (including testing devices, design systems, and inventory control systems);
6. machine and process control strategies; and
7. automated sensing for machine and process control and product testing.

Research at the Centers may be directed toward problems or processes and methods appropriate to specific industrial sectors.

The Committee believes that the current program at the National Bureau of Standards (NBS) in state-of-the-art manufacturing processes and the challenges inherent in automating manufacturing processes will offer a valuable resource to the centers established pursuant to the act. The bill therefore directs the Secretary to maintain at the NBS a research program for furthering the state-of-the-art of automating manufacturing processes through the development of:

A. measurement standards;
B. standard practices;
C. protocols for quality and process control;
D. materials processing;
E. application and interfacing of computers; and
F. other appropriate technologies related to automated manufacturing methods and processes.

Section 6

Authorizes funding for the Secretary of Commerce to identify ways of enhancing utilization of advanced manufacturing methods and to identify the impact on workers of such enhanced utilization.

Section 7

Authorizes funding for the Secretary of Commerce to conduct assessments of the long term competitiveness of domestic technology-sensitive industrial sectors.

Section 8

Establishes the Manufacturing Sciences and Technology Enhancement Advisory Committee to review criteria for grants and cooperative agreements and to assess the programs of the act. The Committee believes that staffing by existing personnel at the Department of Commerce will be sufficient to meet the Advisory Committee's needs.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the committee states that the bill as reported would make no change to existing law.

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Calendar No. 849

98TH CONGRESS
2d Session

SENATE

REPORT
98–432

CORPORATION FOR PUBLIC BROADCASTING AUTHORIZATION

MAY 8 (legislative day, APRIL 30), 1984.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science and Transportation, submitted the following

REPORT

[To accompany S. 2436]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2436) to authorize appropriations of funds for activities of the Corporation for Public Broadcasting, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill do pass.

PURPOSE OF BILL

S. 2436, as reported, would authorize appropriations for the operations of the Corporation for Public Broadcasting (CPB) for fiscal years 1987, 1988, and 1989, and would authorize appropriations for the Public Telecommunications Facilities Program for fiscal years 1985, 1986, and 1987.

BACKGROUND AND NEEDS

The CPB is a private, nonprofit corporation organized under the laws of the District of Columbia. In 1967, Congress authorized its establishment to foster the growth and development of high-quality programs for and by public radio and television broadcasters (Public Law 90–129). CPB is to act as the public trustee for funds appropriated pursuant to the Public Broadcasting Act of 1967, as amended. CPB's responsibilities include the full development of public telecommunications services for the American people while providing a "heat shield" against undue interference or control of programs by the government or any other source of funds or services. CPB is the principal entity accountable to the people through the Congress for the prudent expenditure of appropriated funds and the public interest privileges

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made available to public broadcasting entities pursuant to the Communications Act of 1934.

The Public Telecommunications Facilities Program provides grants for broadcast equipment and other telecommunications "hardware." This program is administered by the National Telecommunications and Information Administration (NTIA) of the Department of Commerce.

In 1975, Congress agreed to appropriate funds for CPB operations 2 years in advance of their use to allow long-range program development and to provide an added measure of insulation from Federal control over or interference with program decisions (Public Law 94–192). In 1978 and in 1981, Congress reauthorized appropriations for CPB for 3 additional fiscal years (Public Law 95–567; Public Law 97–35) and made substantial changes in the law to improve service to the public and ensure accountability of public funds.

The 1981 reauthorization legislation curtailed Federal support for public broadcasting in view of overall Federal budget constraints. At the same time, Congress sought to stimulate alternatives to Federal funding and allowed public broadcasting stations greater freedom to engage in commercial ventures for support. The 1981 authorization also established the Temporary Commission on Alternative Financing to explore financing alternatives for public broadcasting.

Based upon Committee hearings and on the findings of the Temporary Commission, the Committee believes that alternative financing mechanisms have not developed to the point where they can replace or substantially supplement Federal support for public broadcasting. Thus, S. 2436 provides authorization levels that continue the trend established in 1978 and that are substantially higher than those provided by the 1981 legislation.

Legislative History

S. 2436 was introduced by Senator Goldwater (with Senators Stevens, Hollings, Inouye, and Ford) on March 19, 1984. The Subcommittee on Communications held a hearing on S. 2436 on March 26, 1984. The Committee has considered all views presented in recommending the legislation reported herein.

Estimated Costs

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. Congress,
Congressional Budget Office,
Washington, D.C., April 18, 1984.

Hon. Bob Packwood,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, D.C.

Dear Mr. Chairman: The Congressional Budget Office has reviewed S. 2436, a bill to authorize appropriations for the Corporation for Public Broadcasting, and for other purposes, as ordered reported

by the Senate Committee on Commerce, Science, and Transportation on April 10, 1984.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

RUDOLPH G. PENNER,
Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 2436.
2. Bill title: To authorize appropriations for the Corporation for Public Broadcasting, and for other purposes.
3. Bill status: As ordered reported by the Senate Committee on Commerce, Science, and Transportation, on April 10, 1984.
4. Bill purpose: This bill authorizes appropriations for the public telecommunications facilities in fiscal years 1985 through 1987 and for the Corporation for Public Broadcasting in fiscal years 1987 through 1989. This bill is subject to subsequent appropriations action.
5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1985	1986	1987	1988	1989
Public telecommunications facilities:					
Authorization level	50	53	56	....	....
Outlays	5	35	47	49	17
Corporation for Public Broadcasting:					
Authorization level	....	....	238	253	270
Outlays	....	....	238	253	270

Note: The costs of this bill fall in function 500.

Basis of Estimate: The authorization levels for all years are stated in this bill. Full appropriation of the authorization levels is assumed in this estimate. Outlays are based on historical spendout rates.

6. Estimated cost to State and local governments: The budgets of State and local governments would most likely not be affected directly by the enactment of this bill.
7. Estimate comparison: None.
8. Previous CBO estimate: None.
9. Estimate prepared by: Stacey Sheffrin.
10. Estimated approved by James L. Blum, Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

The Public Telecommunications Facilities Program is reauthorized for 3 additional fiscal years. Section 2 of S. 2436 strikes the first sentence of section 393(c) of the Communications Act of 1934, which directs that not less than 75 percent of program funds shall be available for new public telecommunications facilities that will reach unserved areas. The existing statutory criteria for the approval of grant

applications are unchanged, and elimination of the 75 percent allocation will have minimal regulatory impact.

Section 3 of S. 2436 reauthorizes funds for the CPB, a nonprofit private corporation. Because the Corporation is not an agency of the Federal Government, reauthorization does not have a regulatory impact.

Section-by-Section Analysis

SECTION 1

Section 1 amends section 391 of the act to reauthorize the Public Telecommunications Facilities Program for 3 additional fiscal years. S. 2436 authorizes $50 million for fiscal year 1985, $53 million for fiscal year 1986, and $56 million for fiscal year 1987.

These authorization levels are substantially higher than current amounts. Increased funding for the program should attract larger numbers of grant applications, and the costs of administering this program may rise as a result. The Committee notes that the NTIA has the discretion under section 391 of the act to use program funds to cover the cost of administering the program's provisions. In exercising such discretion, the NTIA should consider restraints upon its own budget and whether use of program funds for this purpose would significantly reduce the pool of funds available for distribution, or would otherwise significantly impair the objectives of the program.

SECTION 2

Section 2 amends section 393(c) of the act by striking the first sentence, which provides that not less than 75 percent of program funds shall be available for new public telecommunications facilities that will reach unserved areas. In striking this 75 percent allocation guideline, the Committee intends that the administrators of the Program have the flexibility to use a greater proportion of funds for replacement or rebuilding of equipment in existing public telecommunications facilities. The release of additional funds for this purpose will help prevent service to the public from being disrupted by failures or breakdowns in aging equipment.

In approving grants, the NTIA shall continue to follow the criteria set forth in section 393(b) of the act, which remain unchanged by this legislation.

SECTION 3

Section 3 amends section 396(k)(1)(C) of the act to reauthorize appropriations for the operations of CPB for 3 additional fiscal years. S. 2436 authorizes $238 million for fiscal year 1987, $253 million for fiscal year 1988, and $270 million for fiscal year 1989.

These authorization levels are substantially higher than those authorized by the 1981 legislation. The increase in authorization levels reflects the Committee's view that Federal support for public broadcasting must be strengthened to ensure the ongoing health of the system.

The allocation formula for CPB operations remains unchanged. (This formula was adopted in 1981 and is set forth in section 396(k)(3) of the act.)

This formula sets aside certain funds for program production and acquisition. The act provides that a "substantial amount" of these funds are reserved for distribution to independent producers and production entities. During the course of the Committee's consideration of S. 2436, a number of independent producers urged the Committee to adopt an amendment to the act to provide that a specific percentage of program funds be set aside for independent producers. In 1978, when the reservation for independent producers was enacted, and again in 1981, Congress did not set aside a specific percentage of funds for this purpose, to preserve discretion in the administration of CPB funds.

The Committee has again decided not to set a specific percentage for the funds that are to be reserved for independent producers. By forgoing this amendment, however, the Committee in no way lessens its commitment to independent producers, who are vital to the diversity of public broadcasting programming. The Committee believes that the current statutory requirement in section 396(k)(3)(B)(i) of the act is an important component of the overall funding formula, and that CPB and the public broadcasting stations must continue to work to ensure the full participation of independent producers in public broadcasting.

The Committee notes that CPB and representatives of the independent producers have held a series of meetings on concerns regarding CPB's program fund. As a result of those meetings, the CPB Board approved several clarifications of program fund procedures. Procedures that were clarified included the definition of independent producer, the use of panels of outside experts for the evaluation of program proposals, and support for minority programs and producers. Finally, CPB has agreed to formalize discussions with independent producers by scheduling at least three meetings per year with representatives of the independent producers and the program fund.

The Committee expects that revisions to the panel process will continue to receive special attention. The Committee recognizes that the panel process provides independent producers with an important means of participation in program development. Panel members should be mutually accepted to CPB and the independent producers, and should be representative of the public broadcasting community. The panel process should provide mechanisms whereby the panels can consider proposals that have been rejected by staff. Furthermore, producers whose proposals have been rejected by the staff or by the panels should receive written reasons for the rejection, if requested.

The Committee approves the decision to schedule regular meetings between the fund and the independent producers, and believes that good faith negotiations among the interested parties is consistent with Congressional intent. Ongoing meetings between the program fund and representatives of independent producers will provide a structure whereby the Committee can be alerted to problems in the procedures used to allocate Federal funds for public broadcasting programming. The Committee will monitor CPB's progress in achieving the desired goals.

Changes in Existing Law

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as re-

ported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

THE COMMUNICATIONS ACT OF 1934

Section 391 of that Act

SEC. 391. There are authorized to be appropriated $40,000,000 for each of the fiscal years 1979, 1980, and 1981, $20,000,000 for fiscal year 1982, $15,000,000 for fiscal year 1983, [and] $12,000,000 for fiscal year 1984, *$50,000,000 for fiscal year 1985, $53,000,000 for fiscal year 1986, and $56,000,000 for fiscal year 1987*, to be used by the Secretary of Commerce to assist in the planning and construction of public telecommunications facilities as provided in this subpart. Sums appropriated under this subpart for any fiscal year shall remain available until expended for payment of grants for projects for which applications approved by the Secretary pursuant to this subpart have been submitted within such fiscal year. Sums appropriated under this subpart may be used by the Secretary to cover the cost of administering the provisions of this subpart.

Section 393 of that Act

SEC. 393. (a)–(b) * * *

(c) [Of the funds appropriated pursuant to section 391 for any fiscal year, not less than 75 percent shall be available to extend delivery of public telecommunications services to areas not receiving such services through grants for facilities of new and existing public telecommunications entities, and preoperational expenses associated with such facilities.] In choosing among applicants for grants, the Secretary shall compare the advantages of alternate technologies on the basis of costs and benefits.

(d) * * *

Section 396 of that Act

SEC. 396. (a)–(j) * * *

(k)(1)(A)–(B) * * *

(C) There is authorized to be appropriated to the Fund, for each of the fiscal years 1981, 1982, 1983, 1984, 1985, [and 1986, an amount] *1986, 1987, 1988, and 1989, an amount* equal to 50 percent of the total amount of non-Federal financial support received by public broadcasting entities during the fiscal year second preceding each such fiscal year, except that the amount so appropriated shall not exceed $180,000,000 for fiscal year 1981, $200,000,000 for fiscal year 1982, $220,000,000 for fiscal year 1983, $145,000,000 for fiscal year 1984, $153,000,000 for fiscal year 1985, [and] $162,000,000 for fiscal year 1986, *$238,000,000 for fiscal year 1987, $253,000,000 for fiscal year 1988, and $270,000,000 for fiscal year 1989.*

(D) * * *

(2)–(9) * * *

(l) * * *

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